The Effect of Brand Familiarity on Green Claim Skepticism in Distribution Channel

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Abstract

Purpose: This study aims to explore the impact of green products' claim skepticism on green purchase intention and further investigates the moderating role of environmental concern in the relationship. This study, by drawing the persuasion knowledge model expected that ambiguity avoidance penalizes less familiar brands than familiar brands. Further, the present study building on Hofstede's cultural dimension, specifically, uncertainty avoidance, undertook a scenario to understand any difference that exist between uncertainty avoidance cultural groups. This study also investigates gender differences in green claim skepticism and proclivity to purchase green products. **Research design, data, and methodology:** For analyzing the relationship relevant hypotheses were designed, and R-programming software was used. To test the hypotheses two independent sample t-test and regression analysis were carried out. **Results:** The results suggest that consumers' skepticism toward green claims influenced the intention to purchase eco-friendly products. The study finding also confirms the effect is moderated by environmental concern. Also, the findings of two scenarios reveal that consumers in high uncertainty avoidance culture exhibited a greater level of skepticism for green print advertising and green packaging claims when the brand in the advertising and packaging was unfamiliar than when it was familiar. **Conclusions:** To alter the negative effect of skepticism the consumer should believe the environmental claims are valid so that they can contribute to solving sustainability issues.

Keywords: Green Claim Skepticism in Distribution, Uncertainty Avoidance, Environmental Concern in Distribution Channel, Distribution Strategy of Green Products

JEL Classification Code: M10, M31, M37, C30, L81

1. Introduction

With constant media coverage such as documentaries (e.g., Educational Broadcasting System), film festivals (e.g., Seoul Eco Film Festival), and TV shows (e.g., No Impact Day) showcasing environmental disasters including plastic crisis, and climate change, consumer's concern level for the environment has increased (Ereaut & Segnit, 2006). In line with such global sustainability trends, consumers view cause-related behaviors in a positive light. For example, according to Tyson et al. (2021), 69% of generation MZ consumers demonstrated a higher willingness to purchase products from companies that champion ESG (environmental, social and governance) causes. In a similar vein, consumers have also reported an increased interest in sustainability activities, growing desire for pro-

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environmental products and higher willingness to pay a premium to help protect the environment and to support companies to walk their talk. For example, according to Harvard Business Review (2019), the sales of products marketed as eco-friendly amounted to $114 trillion in 2018, up 29% from 2013. Furthermore, a recent market research reveals that one third of consumers are now favoring brands that espouse positive social and environmental causes (Euromonitor, 2022).

In response to consumers' thriving interest in the environment and preference for green products, many companies, as part of their cause-related communication strategy, have developed eco-friendly products (e.g., hybrid cars, and energy-efficient bulbs), increasingly developing green claims, and spending large amounts of money on promoting them (Matthes & Wonneberger, 2014). In 2020, 92% of S&P 500 firms and 70% of RUSSEL companies promoted sustainability as a significant marketing play (Nicole, 2023). These companies are also largely engaging in sustainability programs (e.g., sponsoring pro-environmental events) and promoting pro-green behaviors (e.g., green advertising) as an important business strategy (Amawate & Deb, 2019). It is also not uncommon to read green catchphrases such as "non-toxic", "eco-friendly", "renewable" and "organic" on new brand and product advertisements. For instance, Samsung Electronics claims that the company uses eco-packaging for the 2021 high-resolution monitors and the Galaxy S21 series products (Samsung, 2020). In a similar vein, the fast fashion brand, Zara, introduced a sustainable project called "Join Life Collection" and labelled and advertised clothes as produced using conscious manufacturing, natural fibre and recyclable packaging (Gheorghe & Matefi, 2021). But how do consumers perceive companies that promote their pro-environmental initiatives? Although consumers perceive companies' sustainability campaigns as positive and are willing to pay more for products with sustainability messages, when making purchases, they are still choosing non-sustainable alternatives. This perception-action gap phenomenon can be attributed to consumers' skepticism toward green claims regarding the environmental and social impact of products.

The adoption of eco-claims has led consumers to doubt and question the actual practices behind closed doors (Lee, 2008). As sustainability has gradually become a prevalent marketing tool, consumers have become more skeptical toward companies that advocate a social cause and are not sure how much of the environmental claims they see in the advertising and the retail shops should believe (Goh & Balaji, 2016). Consumers' distrust toward these environmental claims partly springs from the skyrocketing "greenwashing" (i.e., exaggerating or fabricating green claims) incident (Gheorghe & Matefi, 2021). Studies have

confirmed that distrust of green products' environmental claim authenticity hinders consumers from participating in green practices, hold them back from making a green purchase, and they become fast to call out 'greenwashing' when they notice controversial and vague eco-claims (Magnier & Schoormans, 2015).

Consumers' past experience with the brand has been explained as a basis for questioning the claim of the brand (Bhaduri & Copeland, 2021). Defined as "the direct and indirect brand related-experience accumulated in a consumer's memory", brand familiarity, influences consumer confidence in brand communication (Kent & Allen, 1994). The notion of brand familiarity has captured the interest of marketing scholars in recent years as understanding how consumers utilize their memory of the brand experience is salient for the brand's success. Research demonstrates that brand familiarity affects consumers' psychological and behavioral responses to a brand, enhances the likelihood of inclusion in the evoked set, increases confidence toward the message and raises ad persuasion (Rose et al., 2016).

In particular, past studies have actively investigated the impact of brand familiarity on advertising appeal (Rhee & Jung, 2019), message persuasion (Catalán et al., 2019), product evaluation (Herédia-Colaço et al., 2019) brand's pro-environmental initiatives (Copeland & Bhaduri, 2020) satisfaction, consumer confidence (Laroche et al., 1996), and trust (Ulusoy & Barretta, 2016). In the CSR-related literature, research indicates that consumers evaluate ethical labelling initiatives of brands and their communication based on their prior expertise and level of familiarity with brands (Ulusoy & Barretta, 2016). Nonetheless, in terms of green claim skepticism, beyond some notable efforts (Copeland & Bhaduri, 2020; Hwang et al., 2016; Ulusoy & Barretta, 2016), little has been studied about the conditions under which consumers' eco-label skepticism affects purchase intentions.

Interestingly, even existing studies exhibited conflicting findings, with one stream of studies arguing that consumers are skeptical of green claims (Matthes & Wonneberger, 2014), while others insist that consumers are not (Lee, 2017). Furthermore, the extant literature has not highlighted brands' pro-environmental marketing message skepticism among familiar (vs. unfamiliar) brands. Therefore, investigating consumers' green claim skepticism (GCS, henceforth) concerning brand familiarity as an antecedent of purchase intention is intriguing and necessary. In addressing this intriguing issue, in this study, we raised the concept of consumers' cultural orientations. More specifically, building on one of Hofstede's cultural dimensions (i.e., uncertainty avoidance), this study undertook 2 studies to understand whether consumers high (vs. low) in uncertainty avoidance (UA, henceforth) culture exhibit greater green claim

skepticism for unfamiliar brands than familiar brands. Study 1 provides initial evidence that, for unfamiliar brands, GCS can be heightened in high UA culture. Study 2 replicated study 1 with different stimuli and eco-label on product packaging.

Moreover, while many companies have developed ecological products and adopted eco-labels to convey their sincere efforts to reduce the environmental impact, others very often make greenwashing. Nevertheless, the credibility of companies claimed pro-environmental messages can be subject to consumers' level of environmental concern. For example, studies specified that the effectiveness of advertised green claims tends to be high among consumers who reported high environmental concern (Ulusoy & Barretta, 2016). Several recent academic research recognized the importance of understanding the influence of consumers' environmental concern and addressed the construct as an antecedent of pro-environmental behavioral intention. However, research works addressing environmental concern as a moderator is relatively sparse. In addition, existing studies that investigated eco-label skepticism have only incorporated attitude toward brand image (Amawate & Deb, 2019) as a moderator variable. Yet, research on the variables that moderate the interplay between green claim skepticism and purchase intention is lacking. Thus, exploring environmental concern as a moderator appears to be a necessary condition to build strong environmental relationships. Accordingly, in line with this reasoning, we explored whether the effect of GCS on green purchase intention (GPI, henceforth) depends on the level of environmental concern.

2. Literature Review

2.1. Green Claim Skepticism

Skepticism, in general, refers to a person's predisposition to doubt, distrust and question the claim or statement of others. Skepticism is derived from the Greek term "skeptomai" which indicates "to examine, to consider, and to imagine". Unlike cynicism, which is a relatively stable belief motivated by selfish motives, skepticism involves suspicion and distrust regarding a certain behavior (Boush et al., 1994). Skepticism is a personality trait or a relatively stable belief and situational which may vary depending on specific contexts. In past research works, skepticism has been studied in a wide array of disciplines including psychology (e.g. Ahadzadeh et al., 2021), philosophy (Johnson & Pigliucci, 2004), politics (Taber & Lodge, 2006), and sociology (e.g. Owen-Smith, 2001). Likewise, in business management literature the notion has been principally pursued in the context of social marketing,

corporate social responsibility, advertising, and environmental claims (Dhanesh & Nekmat, 2019; Kumar, 2018).

Studies on skepticism treated the construct with a focus on two perspectives; dispositional skepticism (Skarmeas & Leonidou, 2013), and situational skepticism (Goh & Balaji, 2016). Some studies have focused on the former, in which consumer skepticism is regarded as a stable disbelief developed based on personality traits, and individual experience, while others focused on the latter, which is induced independent of the evaluator and varies subject to specific contexts including the source and characteristics of the claim (Gheorghe & Matefi, 2021). Proponents of situational perspective argue that skepticism can be affected by factors such as brand characteristics, source of the claim, company's pro-environmental commitment, and information quality (Magnier & Schoormans, 2015). These studies posit that skeptical individuals can lessen their suspicion and change their beliefs when approached with sufficient substantiation (Do Paço & Reis, 2012). In contrast, advocators of the dispositional perspective suggest that skepticism develops based on an individual's level of education, media exposure, prosocial, emphatic, and altruistic tendencies, direct and indirect experiences, and socialization (Copeland & Bhaduri, 2020).

In this study, we approached skepticism from situational perspectives. Drawing the brand familiarity conception, we argued that consumer response to green claims and green product advertising can be affected by consumers' brand knowledge. That is, the tendency to doubt the advertising pro-environmental claim and the propensity to disbelief the advertiser's ulterior motives can be a consequence of brand familiarity. The literature suggests that lack of prior exposure and insufficient knowledge about the brand makes it impractical for an individual to make up his/her mind whether to accept or not to accept the claim (Bhaduri, 2020; Herédia-Colaço et al., 2019). According to the Persuasion Knowledge Model (PKM, hereafter), consumers activate their agent's knowledge when confronted with eco-claims and utilize it as a defence mechanism to guard against persuasive attempts. Agent Knowledge refers to consumers' understanding and knowledge of the brand's expertise, goals, and characteristics (Friestad, & Wright, 1994). Thus, we used consumers' pre-existing knowledge of the advertised brand as a claim credibility evaluation instrument.

2.2. Environmental Concern

Most of prior researchers are unable to develop precise definitions and encapsulate the concept of EC from a whole range of environmentally related viewpoints. For example, according to Van Liere and Dunlap (1978) EC refers to consumer's cognitive and affective evaluation of the

environment. According to Fujii (2006) EC entails an individual's awareness and sense of responsibility to sustainability issues. Lee (2008) explained EC as individuals' affective response to environmental problems. Despite these inconsistent definitions, most researchers agree that an environmentally concerned consumer is prepared to protect the planet by purchasing green products from firms they perceive are environmentally conscious (Bamberg Sebastian, 2003; Joshi & Rahman, 2015; Majhi, 2022).

Over the last four decades, consumers' environmental concern (EC) has been a pressing issue among marketing practitioners and academics (Majhi, 2022). The fundamental cause driving this growing interest in the subject is attributed to the direct interaction between environmental concern and pro-environmental behavior; such that people who are highly eco-concerned behave more sustainably (e.g. recycle) (Koenig-Lewis et al., 2014), desert eco-unfriendly products on the shelf (Tam & Chan, 2018), consciously seek out organic products, and more willing to pay a premium for green products than less eco-concerned people (Albayrak et al., 2013). Many study findings have revealed that environmental concern predicts green purchase behavior (Joshi & Rahman, 2015; Majhi, 2022). Sizable prior research findings (Newton et al., 2015; Roberts & Bacon, 1997) assert that individuals who are environmentally concerned tend to display eco-friendly behavior in their actual shopping experience. In favor of this, Liu et al. (2021) found a positive relationship between environmental concern and WTP (willingness to pay) a premium for green products. For instance, previous studies have shown a strong positive link between environmental concern and preference for eco-friendly products such as green deodorant containers, laundry detergent, cosmetics and toiletries and package recycling behavior (Dagher et al., 2015).

Conversely, as opposed to the direct positive effect, some studies have shown that environmental concern sometimes fails to translate into pro-environmental behavior. Many theoretical frameworks (such as the theory of planned behavior, and the theory of reasoned action) have been established to elucidate the discrepancy and attempted to explain the issue from a different perspective such as learning strategies (Newton et al., 2015), situation-specific beliefs (Bamberg Sebastian, 2003), and cross-cultural psychology (K. P. Tam & Chan, 2017; Rogers & Norton, 2009). For example, (Lorenzoni et al., 2007) explained the concern-action gap about individual psychological attributes such as fatalism (i.e., the feeling of powerlessness) and climate issues as a far-off threat. Furthermore, (Newton et al., 2015) reported fear of free riders as the main barrier to the effective translation of concern into green purchase intention. However, there is a dearth of investigation that attempted to understand the underlying issue from the

perspective of consumers' skepticism of eco-claims. Therefore, to uncover the underlying pattern of interaction, this study proposed consumer's green claim skepticism as an antecedent of green purchase intention and environmental concern is introduced in the model to play a moderation role in the relationship.

2.3. Brand Familiarity

Brand familiarity has long been an area of focus for marketers and scholars due to its influence on consumer behavior. Brand familiarity refers to the consumer's accumulated prior experience with the brand. It reflects prior direct or indirect experiences consumers accumulated in their memory regarding the product/services (Hardesty et al., 2002). This experience ranges from indirect word-of-mouth communication to direct personal consumption (Söderlund, 2002) and is attained through repeated exposure to advertisements, prior consumption, or store experiences (Hutchinson & Alba, 1991). Due to its effect on consumer decision-making, brand familiarity has been the subject of interest in past plethora of studies. Consumers rely on their past experience, which includes brand knowledge and image, to evaluate their brand familiarity. Familiarity with the product features is crucial in determining actual behavior. Studies exhibit that familiar brands (vs. unfamiliar brands) minimize perceived risk and enhance confidence (Tam, 2008).

When consumers have no prior brand knowledge, they find it difficult to evaluate the persuasive message content, thus, they demonstrate less skepticism (Hardesty et al., 2002). Building on the persuasion knowledge model, (Copeland & Bhaduri, 2020) has reported that when consumers are unfamiliar with the agent's motives and brand elements, they tend to signal resistance to accepting the message. On the contrary, when commercial persuasive attempts are familiar, they tend to be receptive to the ad messages as they can easily recognize the advertisers' brand and ulterior motives (Hutchinson & Alba, 1991). Strikingly, research indicates that an individual may exhibit strong skeptical behavior when he/she has no adequate knowledge about the content and issue which triggers them to be more concerned and vigilant of the advertisers' motives (Taylor & Barber, 2012). For example, (Dahlén et al., 2008) noted that consumers have a strong proclivity to distrust pro-environmental advertising messages when they lack information about the source of the ad as a result, they question the credibility of the message. In a similar vein, consumers tend to be less doubtful of the green messages when they are well-versed in the persuasive pro-environmental messages and tactics of the agent (Tam, 2008).

Because consumers have limited exposure and

knowledge about the brand, they are likely to react negatively to unfamiliar brands' advertising claims (Hardesty et al., 2002). Prior studies argued that, owing to little prior knowledge base to form product evaluation, consumers tend to respond negatively when they encounter persuasive attempts from unknown and unfamiliar message sources and are more likely to be cynical of the credibility of the agent (Donato, 2021). Research evidence indicates that as opposed to unfamiliar and fictitious brands, familiar brands have greater convincing power, and regarded as trustworthy information sources (Dahlén & Lange, 2004). Familiar (vs. unfamiliar) brands reduce uncertainty and foster consumers' engagement with the brand (Chandler & Schwarz, 2010). An experiment reveals that consumers when presented with brand alternatives to choose from, familiar consumers picked brands they had exposure to, although the quality was inferior, conversely, unfamiliar consumers selected high-quality brands (Dahlén et al., 2008).

3. Research Hypothesis

3.1. Uncertainty Avoidance, Brand Familiarity and Green Claim Skepticism

Imagine a consumer walking through the detergent aisle of a grocery store. Suddenly the packages of two detergent brands grab the consumer's attention, one he has prior experience with while the other is fresh to his memory. An eco-label is marked on both brands' packages, and they also claim "100% organic". Which brand's green claim most likely he trusts and which one most likely he doubts? To answer this intriguing question, we draw the concept of consumers' cultural orientation, specifically uncertainty avoidance (UA), and investigated whether consumers are high (vs. low) in UA culture demonstrate higher levels of skepticism for green products claim when the advertising or packaging shows unfamiliar vs. familiar brands.

Consumers exhibit some level of uncertainty when communication is presented. However, the degree to which consumers operate comfortably with uncertainty or manage ambiguity is contingent on individuals' cultural orientations (Newton et al., 2015). In some cultures, to lessen the perceived risk consumers may adopt uncertainty-reducing approaches while in others tolerance and cognitive flexibility are relatively high. More precisely, cultures that embrace uncertainty tolerate novel, unknown, and surprising situations, entertain diverse opinions and adopt innovativeness and creativity (Latif et al., 2019). In contrast, members of high UA culture value regularity, ingrained practices, and structured situations (familiar, known, etc.) (Fischer & Derham, 2016).

Cultures highly positioned on the UA scale tend to feel

intimidated by ambiguous products and communications and are more pessimistic about adopting new brands and their advertisements. One possible way to reduce uncertainty is to rely on external cues such as familiar brand names. Consumers in these cultures favor products and brands that are already established in memory since these are likely to seem less novel and surprising (Hofstede, 2011).

In green advertising contexts, the brand that a consumer has stored in memory (i.e., brand familiarity) can influence processing and message response. Consumers would have adverse reactions to familiar brands' green initiatives. According to the (Berlyne, 1970) two-factor theory, responses to known brands could be more negative than novel brands because consumers already know something about the brand. Further, repetitions seem less interesting, and familiar brands provide less opportunity to learn, thus may increase consumers' reactance against the brand's skepticism toward the advertisement. However, in this study, we argue that such may not be the case for consumers' high UA culture. Because people high in uncertainty avoidance culture avert unknown and unexpected events, they may exhibit high skepticism for green advertising and eco-label claims than low uncertainty avoidance cultures. That is, countries scoring high on this dimension index may tend to feel uncomfortable and more likely to reject the claims of the company when they discern unknown, unfamiliar, and ambiguous situations (Latif et al., 2019). Thus, with the view of avoiding the risk of choosing the unknown, they may exhibit a strong predisposition to eschew claims of unfamiliar products (Hofstede, 2011). Therefore, building on this logical argument the following hypotheses are developed.

H1: In high (vs. low) uncertainty avoidance culture, skepticism of green claim will be greater for less familiar brands than familiar brands.

3.2. Green Claim Skepticism and Purchase Intention

PKM explains that consumers through experience, education, and interaction with others, build knowledge about the marketers' motives and strategies; this, at the later stages, can serve as an instrument to cope with persuasive attempts(Friestad & Wright, 1994). Through the formed persuasion knowledge, consumers scrutinize the motive of the claim, and the credibility and trustworthiness of the message (Golovacheva, 2016). Friestad and Wright argued that consumers activate their persuasion knowledge and utilize it when marketers attempt to influence them. That is, they tend to be persuaded if the tactics and claims are deemed appropriate and fair, whereas if the approach is considered as manipulative and misleading, consumers tend

to exhibit skepticism and are unlikely to respond positively, instead they react by resisting and discounting the persuasive claim (Friestad & Wright, 1994).

Consumers are very aware of the ever-increasing incidence of misleading, manipulative, vague, generic, and not well-defined environmental claims (Majhi, 2022). This in turn makes it difficult for them to easily accept the argument without questioning the credibility of the claim (Schmuck et al., 2018). With greater persuasion knowledge and a higher degree of environmental claim exposure, consumers are likely to discern unsubstantiated and vague green claims and can differentiate between trustworthy and deceptive green claims (Do Paço & Reis, 2012). Studies have suggested that increased knowledge of marketers' persuasive tactics and motives enables consumers to better understand how marketers present a biased argument and therefore leads to higher skepticism toward such persuasive tactics (Mangleburg & Bristol, 1998).

Similarly, the attribution theory suggests that individuals make causal attributions regarding organizations' motives and this cognitive perception exerts influence on their subsequent attitude and behavior, including evaluation of the company's claim credibility (Leonidou & Skarmeas, 2017), and purchase intentions (Ginder, 2016). Accordingly, consumers attribute companies' green actions (e.g. environmental claims in advertisements or packaging claims) to internal causes (e.g. due to the company's dispositional belief in or sincere concern for the environment) or external firm-serving causes (e.g. improving the firm's brand and corporate image) (Leonidou & Skarmeas, 2017). The theory further explains that, when firms' pro-environmental claims are attributed as manipulative and misleading, consumers' attribution process can lead to skepticism and it can result in a negative attitude toward the claim and higher hesitation to purchase green products (Bae, 2018).

According to Goh and Balaji (2016b), consumers doubt the eco-claim of green products and this disbelief is partly the consequence of non-uniform green product standard and certification procedure and mostly stem from companies mislabeling and misrepresentation of green products. Consumers are curious about the credibility of environmental claims and hold equivocal opinions regarding the environmental benefits and performance of green products (Winter, 2012). In addition, they are suspicious of the firm's motive and question the credibility of green claims in advertising and packaging labels. They indeed perceive that companies are merely saying they are pro-environmental instead of walking their talk (Goh & Balaji, 2016). As PKM suggests, consumers are bombarded with hundreds of thousands of green advertisement messages and their growing ecological knowledge enables them to construe and scrutinize the persuasion agent's claim genuineness (Friestad et al., 1994). When they consider the

attempt as misleading, they tend to activate their persuasion knowledge, cope with the persuasive attempts, pull out to make an effort to go green and tend to be reluctant in purchasing eco-friendly products (Ginder, 2016).

A plethora of research across different areas such as cause-related marketing (Bae, 2020; Leonidou & Skarmeas, 2017), and persuasive advertising (Boush et al., 1994; Obermiller et al., 2005) provides empirical evidence that consumers are skeptical of companies' green claims. In a similar vein, extant research in green skepticism suggested that consumers often distrust environmental appeals and such doubt has a detrimental effect on consumer response, such as a negative attitude toward the message claim and unfavorable product evaluation. For example, using ABC theory Goh and Balaji (2016a) examined the consequences of green skepticism. The research found that green claim skepticism adversely impacts message credibility and further consumer behavior. Furthermore, more recently Yu (2020) examined consumer response toward green advertising and suggested that consumers are more likely to attribute companies' green efforts and motives to for firm-serving cause than to genuine ecological concern, and therefore, attenuate their intention to take further action. To contribute more to the understanding of how GCS affects purchase intention, we undertook the relationship from the South Korean consumer perspective.   Thus, based on the above discussion, we proposed the following:

H2: Green claim skepticism leads to lower green purchase intention.

3.3. The Moderation Role of Environmental Concern

To appeal to eco-concerned consumers, companies have been extensively making assertions about how environmentally sound their products and service operations are (Atkinson & Kim, 2015). However, although few brands are making sincere eco-claims, many others, to capitalize on the increasing demand for sustainable products, are making false, unsubstantiated, deceitful, and fabricated green claims, also known as greenwashing. Consumers want to demonstrate their concern for the environment by purchasing brands that embrace and advocate sustainability; however, the growing greenwashing incidence can cause skeptical attitude toward green claims, which may deter them from making such commitment (Ulusoy & Barretta, 2016).

With the sustained rise in misleading green claims, many environmental organizations and green market observers have noted that there is growing consumer confusion and skepticism concerning green claims. Because many companies use unsubstantiated statements (e.g. 100% energy efficient), vague (e.g. low carbon), and generic (e.g.

eco-friendly) green claims, some firms and environmental advocates worry that it may spark skepticism toward green claims including legitimate eco-labels and devalue eco-concerned consumer's confidence and intention to buy green products (Syadzwina & Astuti, 2021). Research has suggested that third-party verified eco-label certificates enhance consumers' confidence more than company-declared claims (Newton et al., 2015). However, the challenge is many consumers lack the knowledge ground necessary to comprehend and evaluate the advertised green claim and differentiate between trustworthy and untrustworthy claims.

This study argues that consumers with a high (vs. low) degree of EC tend to be more vigilant, more able to identify deceptive green claims, and more skeptical of green claims made by marketers, thus would have lower green purchase intention. Previous studies argue that consumers do not engage in the information search process equally (Kent & Allen, 1994; Showkat & Grimm, 2018). Such a difference is also apparent in the elaboration of already available, firm-stated environmental claims. Studies suggested that high (vs. low) EC consumers have high intentional learning (i.e. the ability to cognitively search and process company-declared claims) and incidental learning (i.e. the ability to draw upon previously acquired information) (Newton et al., 2015; Pickett-Baker & Ozaki, 2008). With respect to intentional learning, because high EC individuals are more curious about the impact of their decision on the environment, they tend to make an informed decision (Leire & Thidell, 2005), thus they are more likely than low EC individuals to cognitively evaluate available claims and examine whether the claim is reviewed and approved by third parties, and also likely to double-check and compare the claim with other green claimed products on the shelf (Bjørner et al., 2004).

Likewise, on the basis of incidental learning, due to their curiosity about ecological causes, high EC consumers are more exposed to green claims in their course of everyday life (Hutchinson & Alba, 1991), thus they are well-positioned to passively learn about environmental-related information than low EC consumers (Newton et al., 2015). As noted previously, in an attempt to enhance their corporate image, many firms make green assertions about their products and sustainable engagements, thus high EC consumers can obtain more information regarding companies' green claim tactics and persuasive attempts, thus tend to be more skeptical than low EC consumers (Pickett-Baker & Ozaki, 2008). This skepticism can have an adverse effect on their intention to purchase eco-friendly products (Leonidou & Skarmeas, 2017). In sum, high eco-concerned consumers are more active in environmental issues, more aware of brand's persuasive attempts, more cautious about environmental causes, and tend to cognitively process claims than low eco-concerned consumers; as a result, they

may exhibit high skepticism toward green claims which may lead to a reduction in the purchase intention of green products. Therefore, this study expects that green claim skepticism may discourage high (vs. low) EC consumers from making green purchase intentions.

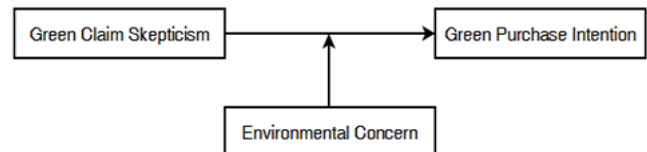**H3:** Environmental concern weakens the effect of green claim skepticism on green purchase intention.

Figure 1: Research Model. Source: Own compilation

3.4. Gender Differences in GPI

In the investigation of green consumption intention and behavior, most extant studies argue that women display a greater willingness to take actions to support pro-environmental causes and higher consumption intentions (Dagher et al., 2015). In contrast, men perform less environmental behavior (e.g., recycling), feel remorseless about pursuing a non-green lifestyle, make greater overall carbon footprints, and are less likely to put an effort to purchase green products than women (Brough et al., 2016). Prior studies that investigated the gender-gap in green purchase intention suggested that the rationale for such difference is attributed to personality traits, and gender stereotype perspectives (Migheli, 2021).

First, the personality trait perspective of the gender gap in green consumption suggests that women often have greater sympathy, show more assertive behavior and care more for others and the planet (Brough et al., 2016). Women also have a greater propensity to play more altruistic and prosocial roles and are more likely to exhibit biospheric behavior than men. The notion of environmentalism, which is grounded in caring for the planet and supporting pro-environmental causes that can help protect the environment, has been strongly linked to female gender roles (Loureiro & Lotade, 2005). For example, previous studies relate caretaking with environmentalism and conservation and suggest that caring, nurturing and being benevolent are the central traits of women and these traits can mirror environmental behaviors such as playing altruistic roles, less carbon consumption and energy-saving behaviors (Yu, 2020). As a further illustration, (Zhao et al., 2021) using Value-Belief-Norm (VBN) theory suggests that environmental commitment (e.g., consuming less carbon), green consumption intention and behavior are more positive among women than men individuals.

Second, the greenness-environmental response

difference has also been explored concerning the concept of the greenness-feminine stereotype. There is a growing stereotype that the practice of "being green" and pursuing green behaviors are conceived by both genders as more feminine than masculine, as a result of this stereotype, people may judge green consumers as feminine (Swim et al., 2020). For example, Dagher et al. (2015) suggest that traditionally, men who perform pro-environmental activities were teased for being feminine. Further, people associate green consumption and ecological behaviors (e.g., using recyclable grocery bags more often and cleaning up the urban environment) with women. Besides, activities such as laundry, cleaning, cooking, grocery, shopping, environment protection, and family health, are more linked to women, which are the prototypical target areas of many green marketing efforts (Brough et al., 2016). Another stream of study posits that the font styles and colors of many green advertising claims are perceived as more feminine. Consistent with this, other studies consider green consumption behaviors such as saving water, supporting recycling product packaging, choosing public transportation and lower energy consumption cars as less related to masculine characters (Brough et al., 2016). This greenness-feminine stereotypical perception may engender men to avoid green consumption and even to oppose green practices because they tend to believe that engaging in non-green behaviors will help safeguard their masculine gender identity. As a result, men consumers are more likely to perform behaviors that are consistent with their masculine traits, thus tend to avoid green alternatives and engage in non-green consumption behavior than women.

Extant empirical works on gender and green consumption intention suggest that because green products threaten masculinity identity, men are more likely to eschew green choices (Swim et al., 2020). For example, building on the social-identity theory, Brough et al. (2016) argue that when their ingroup identity (i.e., masculinity) is threatened, men will engage in compensatory behaviors such as derogation of outgroup members (Branscombe et al., 2002) and perform ingroup identification (Maass et al., 2003) and self-reflection behaviors that are distant from the outgroup behavior (Munsch, 2012). For instance, prior research suggests that men tend to avoid brands when they expand to include new offerings that have feminine connotations and eschew gender-contaminated brands and products (Avery, 2012). Therefore, to safeguard and affirm their masculinity men may display less intention to engage in green consumption than women.

Previous studies argue that, since women display stronger altruistic behavior and greater commitment to the environment, they show a higher tendency to purchase eco-friendly products than men (Vainio & Paloniemi, 2014). Women are more likely than men to perform alter their

consumption behaviors that are particularly environmentally conscious, enact a wide range of pro-environmental behaviors and often appear at the forefront of environmental campaigns (Morrell & Jayawardhena, 2010). It has been shown that the likelihood to purchase eco-labelled household green products and ethically sourced products is stronger in women than in men (Loureiro & Lotade, 2005). Based on the above reasoning and compelling empirical evidence, we proposed the following.

H4: Women are more likely to make green purchase intention than men.

3.5. Gender Differences in GCS

Consumers expect companies to address environmental issues and demand brands to embrace sustainability, however, they often respond to green initiatives with deceptive and misleading green claims. Consumers engage in claim elaboration and tend to detach from engagement and discount green claims when the claims are considered skeptical. However, previous studies identify gender differences in message elaboration and information processing (Yu, 2020). Furthermore, regarding green claim skepticism, previous studies suggest that men and women exhibit different levels of skepticism. This study using the Elaboration Likelihood Model (ELM) and the Heuristic-Systematic Model (HSM) of persuasion explores the difference between women and men in claim processing and elaboration and how it affects skepticism toward companies' green claims (Durmaz et al., 2015).

The ELM provides a useful framework for understanding how consumers elaborate on companies' persuasive green claims. According to ELM, when confronted with a compelling message, people react via the two routes of influence: the central route and the peripheral route (Durmaz et al., 2015). The two routes differ in the amount of elaboration. Individuals taking the former route make a high cognitive effort and scrutinize the merits and relevance of the persuasive claim (Chen et al., 2021). Conversely, individuals taking the later route think less critically about the persuasive claim instead of relying on heuristics tied to peripheral cues. Based on ELM, an individual's motivation and ability affects the elaboration likelihood. As previous studies have found, individuals differ in their motivation and ability to elaborate, which in turn can affect the level of green skepticism. Nevertheless, when skeptical claims are presented, elaboration is likely minimal (Amawate & Deb, 2021).

In a similar vein, the HSM also provides an intriguing explanation regarding the information processing style of women and men. The HSM suggests that people form an opinion toward companies' persuasion claims using two

information processing strategies, i.e., systematic, and heuristic processing (Griffin et al., 2002). Individuals think through systematic-based processing carefully analyze any information provided and determine whether the claim is credible, trustworthy, or valid. In contrast, individuals thinking through heuristic-based processing use single cues which involve shortcuts known as heuristics and decide how sincere and truthful the claim of the argument is.

Past research portrays gender differences in information processing strategies. In comparison with men, women tend to think more critically about marketing information and put high cognitive effort to scrutinize the claim (Kreczmańska-Gigol & Gigol, 2022). Women tend to engage in thoughtful processing of information or elaborate the claim more deeply than relying on simple inferences such as the physical attractiveness of the endorsers (Brough et al., 2016). Studies have shown that women are more systematic in their thought processes and pay considerable attention to the available cues as a whole, while men engage in selective cue processing (Amawate & Deb, 2021). Consistent with this conception, the selectivity hypothesis suggests that men, compared to women are less likely to engage in collective claim processing, and instead are selective. Cues used by men are highly noticeable and salient in the current context. Conversely, women attempt to assimilate and analyze all available cues, and then comprehensively process claims (Yu, 2020).

In the green claim, women tend to consider environmental messages more relevant and more likely to show a higher interest, thus when confronted with eco-labels they carefully analyze the contents, and engage with the message, which increases the likelihood to believe the argument of the claim (Golonka & Gulla, 2021). Studies have shown an inverse correlation between claim engagement and claim skepticism, such that low claim engagement results in a high level of skepticism (Chen et al., 2021). Less interest in the information presented by marketers engenders failure to engage in message elaboration. This less interaction with the message can trigger skepticism (Yu, 2020). For example, imagine reading an eco-packaging label. The thoughtful processing of information and attention to the eco-label is more likely to be higher when an individual considers the environmental issue presented relevant. When they have a high desire to engage, they tend to show higher message acceptance.

Based on the ELM and HSM, we argue that because men are more likely than women to process information using single cues that are highly noticeable (e.g., the green packaging color), and elaborate less cognitively when confronted with green claims they tend to exhibit higher levels of skepticism. Besides, compared to men, women were found to be more altruistic, pro-social and enthusiastic in promoting pro-environmental activities, thus may find the

green claim more relevant, which results in higher engagement (Brough et al., 2016; Sundström & Mccright, 2013). Studies suggest that skepticism can be reduced when message engagement is high. Therefore, we posit that women (vs. men) may exhibit less green claim skepticism. As a salient demographic variable, gender difference concerning skepticism has been explored in past studies such as advertising, and CRM (Amawate & Deb, 2019; Bae, 2020; Zhao et al., 2021). For example, in the advertising skepticism studies, as opposed to men, women showed a higher willingness to accept advertising claims in general and were less likely to doubt messages (Berney-Reddish & Areni, 2006). Extant CRM message skepticism studies found that men demonstrated higher skepticism toward cause-related programs and persuasion communications than women (Amawate & Deb, 2019). Therefore, based on the above reasoning and discussion, we proposed the following:

H5: Men are more skeptical of green claims than women.

4. Research Design

The study employed a quantitative research approach. Regarding the sampling technique, the convenience sampling method was employed. The convenience sampling technique is a sampling method used to obtain those units that can be reached conveniently. This method allows for a large number of questionnaires to be obtained quickly and efficiently (Zikmund & Babin 2010).

4.1. Measure

All measures used five-point scales, and the robustness of the scales has been tested in previous studies, thus the items adapted were deemed to be appropriate for the study. The first section of the study consists of three constructs, environmental concern, green claim skepticism and green purchase intention. Environmental concern construct was measured using the five items adopted from Chen and Tung (2014). The items include the following: "Mankind is severely abusing the environment," "I think environmental problems cannot be ignored," "I am very concerned about the environment," "I would be willing to reduce my consumption to help protect the environment," and "Anti-pollution laws should be enforced more strongly".

Green claim skepticism was measured using three i tems that were adopted from Mohr, Eroğlu, and Ellen (1998). These items include the following: "Because environmental claims are exaggerated, consumers would be better if such claims on green package labels or in advertising were eliminated," "I do not believe in most of

the environmental claims made on the green package labels or in advertising," and "Most environmental claims made on green package labels or in advertising are not true". Measures for purchase intention were adopted from Mostafa's research (2006). These items include the follo wing: "I would consider buying eco-friendly products because they are less polluting," "I would consider switching to eco-friendly products for ecological reasons," "I intend to purchase eco-friendly products in the future because of their positive environmental contribution," and "If I were shopping for a product, I would consider buying an eco-friendly product". Brand familiarity was measured using Robert et al. (1994) one-item measurement scale, which is designed in a five-point scale. The item is: "How familiar are you with this brand?" (1 = Unfamiliar, 5 = Familiar).

4.2. Data Collection

University students who are currently continuing studies in different programs in Seoul, South Korea were the target groups of the study. Both primary and secondary data collection methods were employed in this study. Primary data was collected using a survey questionnaire. In view of avoiding physical contact with participants due to the COVID-19 pandemic, a survey questionnaire was distributed to selected study participants via Google Form, an online survey tool. The data was collected between 08 November 2022 and 15 March 2023. A total of 141 respondents participated in the study. The data analysis was conducted based on 102 usable data, after eliminating three uncompleted questionnaires. Conversely, secondary data was collected from reputable journal articles, books, credible online insights, and other pro-environmental-related sources.

4.3. Statistical Data analysis

Data analysis was made using R programming. The study participant's demographic characteristics are analyzed using descriptive statistics. Furthermore, inferential statistics were used aiming at exploring the effect, strength, and direction of the relationship of each construct with the dependent variable. Thus, the difference between the two cultural groups (high and low uncertainty avoidance) was measured using two independent sample t-test. Also, multiple regression analysis was undertaken to investigate the effect of green claim skepticism, and environmental concern on green purchase intention. To examine if environmental concern weakens the effect of skepticism on green purchase intention, environmental concern was added to the regression model as a moderating variable.

5. Results and Discussion

5.1. Characteristics of the Sample

The characteristics of respondents are shown in table 1. A total of 148 undergraduate students at a university in Seoul, South Korea participated in this study. Of the 148 participants, seven were eliminated because of incomplete responses, resulting in a total sample size of 141. The sample was almost evenly distributed between male and female study participants with 46.8% and 53.2% respectively. Most respondents were between 20 and 30 years old (73.7%) followed by 31 to 40 years (20.5%), less than 20 years (3.5%), and 41 to 50 years (0.2%). 74.4% of the participants were students, 14.9% were professionals such as doctors, lawyers, teachers, and engineers, and 4.2% were civil servants.

5.2. National Culture

Hofstede (2011) developed a robust and most widely utilized framework to understand differences in culture across countries using six dimensions. The framework is designed to differentiate national cultures based on dimensions and to examine their influence on a business environment. The dimensions are individualism vs. collectivism, power distance, masculinity vs. femininity, uncertainty avoidance, short-term vs. long-term orientation, and restraint vs. indulgence. According to the theory, a country's national culture is scored from 0 to 100. As the primary goal of the study was to compare participants' level of green claim skepticism, only the uncertainty avoidance dimension was used for the analysis. Thus, 141 participants who are from 38 countries were grouped into two classes: low and high on the uncertainty avoidance scale. For the study a score of sixty is used as a cutoff point, therefore, respondents' countries scoring in this dimension below sixty are grouped as low and over sixty are treated as scoring high. Accordingly, 68 and 73 respondents were grouped in low and high uncertainty avoidance classes respectively.

5.3. Hypotheses Testing

In the next section, this study presents three studies to examine the hypotheses. Study 1 tests consumer green claim skepticism for brands that are familiar (vs. unfamiliar) in relation to uncertainty avoidance. Study 2 replicates Study 1 with different stimuli (i.e., an eco-friendly packaging claim). To examine the effect, consumers are grouped as high and low UA. Study 3 tests consumers' overall green claim skepticism in relation to purchase intention. Furthermore, this study also examined the moderating effect of environmental concern on the link between skepticism and

green purchase intention and gender difference in green claim skepticism and purchase intention.

I. Study 1

Study 1 used an online questionnaire designed to test, if uncertainty avoidance leads high (vs. low) UA cultural consumers to exhibit greater skepticism for unstructured situations; their response to green eco-claim should be more negative when the brand is unfamiliar than familiar. In this way, Study 1 provides preliminary evidence that green claim skepticism is greater for less familiar than familiar brands in high vs. low uncertainty avoidance culture.

Stimuli Development and Procedure

Regarding brand familiarity, respondents were presented with two actual familiar and unfamiliar brands. The selected brands were drawn from the apparel industry brands, one familiar brand (an international clothing brand, Zara) and one unfamiliar (a small-scale clothing brand in a developing country, Amsale). Subsequently, each subject read scenarios of two advertisement brochures consisting of information about two familiar and unfamiliar brands. In the scenario, respondents were told to imagine purchasing clothes online and on the online shopping website, they see two brands of clothes with environmental advertising. On the website they were presented with three different items of clothing, winter jacket, jeans and sports clothing and the price of each product of both brands was similar. Likewise, the design of the web page, the color of the products and the page, the font of the labels, the green claim, and product placement are all the same.

Then, participants rated their level of familiarity with the brand and were instructed to complete a questionnaire about their level of skepticism. Mohr, Eroğlu, and Ellen (1998) three measurement items were adapted to measure advertising green claim skepticism (e.g., "I doubt the environmental claims made by the brand in the product label," and "The environmental statements made by the brand in the product label are intended to mislead rather than inform the consumer".

Source: Own compilation

Figure 2: Green claim advertising used in the study 1 (green print advertising).

Manipulation check

After being presented with the green claim advertisement stimuli, participants in both high and low uncertainty avoidance culture rated their level of familiarity with the brand. As expected, the familiar brand ad featuring eco-friendly clothing (i.e., Zara) was determined to be high in familiarity in low ($M_{LUA\text{-}Familiar\ Brand}$ = 4.338) and high ($M_{HUA\text{-}Familiar\ Brand}$ = 4.424) uncertainty avoidance culture groups. In contrast, the unfamiliarity brand ad featuring eco-friendly clothing (i.e., Amsale) was determined to be less in brand familiarity in low ($M_{LUA\text{-}Unfamiliar\ Brand}$ = 1.397) and high ($M_{HUA\text{-}Unfamiliar\ Brand}$ = 1.411) uncertainty avoidance culture groups.

Results

In the first hypothesis, it was predicted that the propensity of green claim skepticism would be greater in high (vs. low) uncertainty avoidance national culture and the magnitude of skepticism would be higher when the brand is less familiar than when it is familiar. Participants were grouped in high and low uncertainty avoidance groups based on each respondent's country's uncertainty avoidance score in Hofstede's cultural dimensions.

The two independent t-test results ⟨see Table 1⟩ reveals that, for the familiar brand (Zara) there was no significant difference in the green advertising claim skepticism between the low uncertainty avoidance ($M_{LUA\text{-}GCS\ for\ Zara}$ = 3.049) and high uncertainty avoidance culture ($M_{HUA\text{-}GCS\ for\ Zara}$ = 3.054) (t= -0.0365, p = 0.9709). However, ⟨see Table 1⟩ for unfamiliar brand (Amsale) individuals in the high uncertainty avoidance ($M_{HUA\text{-}GCS\ for\ Amsale}$ = 3.76) shows a higher level of skepticism for green advertising claim than low uncertainty avoidance individuals ($M_{LUA\text{-}GCS\ for\ Amsale}$ = 3.23) (t = -3.2872, p < 0.001). The result shows that high UA cultural group participants' green claims skepticism was significantly higher for an unfamiliar brand than a familiar brand; however, such effect was not observed among low UA cultural group participants. Therefore, this result supports H1. Marketers should be vigilant of consumer skepticism and need to ensure whether skepticism is prevalent by undertaking recurrent and periodical surveys for the distribution and retailing of consumer green products in countries with high uncertainty avoidance culture.

Table 1: Test of uncertainty avoidance, brand familiarity and green claim skepticism (clothing)

Brand	Variable	N	BF Mean	GCS Mean	t-Stat	p
ZARA	Low UA	68	4.33	3.05	-0.04	0.97
	High UA	73	4.42	3.05		
AMSALE	Low UA	68	1.40	3.23	-3.28	0.01**
	High UA	73	1.41	3.76		

Notes: **Significant in 0.01 levels. Source: Own compilation

II. Study 2

Study 2 aimed to replicate Study 1 but with a diff erent green claim (i.e., eco-friendly packaging label). Consistent with the previous test, Study 2 was designe d to test whether consumers high in uncertainty avoid ance demonstrate higher green claim skepticism when the pro-environmental message appears in a familiar br and than in unfamiliar brand packaging.

Stimuli Development and Procedure

As in Study 1 two brands were drawn from the detergent category: for familiarity condition, Persil detergent (an international detergent brand) and for unfamiliar condition, Shemu detergents (a regional detergent brand in a developing country) were employed. Participants were exposed to pro-environmental packaging labels of two brands. Then, they were asked to imagine purchasing laundry detergent online. On the online shopping website, they were presented with two laundry detergent brands with environmental packaging labels. Next, they were instructed to read the information about each brand's eco-claim. Participants were told about the laundry detergents' environmental claims (i.e., biodegradable formula, no harsh chemicals, and certified eco-friendly detergent). The logo of the two packaging eco-claims consists of green information such as 100% natural and eco-friendly. Except for the brand other information appears on the packaging such as green claims and prices were the same. Then, participants were asked to indicate their degree of skepticism of the packaging claim. Measurements were adopted from Mohr et al. (1998).

Source: Own compilation

Figure 3: Green claim advertising used in the study (eco-label packaging advertising).

Manipulation Check

After reading the scenario, respondents were instructed to report how familiar they perceived each brand of detergent. The brand familiarity response was measured using Robert et al. (1994) measurement scale, which is designed in a five-point scale, (1 = Unfamiliar, 5 = Familiar). The result shows that participants in both high uncertainty avoidance ($M_{HUA\text{-}Familiar\ Brand}$ = 3.575) and low uncertainty avoidance ($M_{LUA\text{-}Familiar\ Brand}$ = 3.397) cultures perceived the familiar brand (i.e., Persil) to be significantly more familiar. Conversely, a packaging label featuring a green detergent brand (i.e., Shemu) was perceived to be significantly more unfamiliar in both high uncertainty avoidance ($M_{HUA\text{-}Unfamiliar\ Brand}$ = 1.315) and low uncertainty avoidance ($M_{LUA\text{-}Unfamiliar\ Brand}$ = 1.632).

Result

The goal of this test was to replicate H1 suggesting that consumers in high (vs. low) uncertainty avoidance culture would have greater skepticism for unfamiliar brand claims that communicate pro-environmental messages than for familiar brands. The two independent t-test result ⟨see Table 2⟩ shows that for the familiar detergent brand (i.e., Persil) the green packaging claim skepticism for low uncertainty avoidance culture was ($M_{LUA\text{-}GPLS\ for\ Persil}$ = 3.161) and for high uncertainty avoidance culture was ($M_{HUA\text{-}GCS\ for\ Persil}$ = 3.027) with a (t = 0.94872, p = 0.3444).

Conversely, for the unfamiliar detergent brand (i.e., Shemu) the difference in the level of green packaging claim skepticism in low ($M_{LUA\text{-}GPLS\ for\ Shemu}$ = 3.23) and high uncertainty avoidance ($M_{HUA\text{-}GPLS\ for\ Shemu}$ = 3.59) cultural groups was significant with (t = -2.0739, p = 0.0399**). The result shows that when the green claim was communicated on the packaging label of the unfamiliar brand, the level of skepticism tends to be greater in high uncertainty avoidance culture than low uncertainty avoidance culture.

As shown in the above two-independent t-test results, consistent with Study 1, the difference in green claim skepticism between the two cultural groups for a familiar brand (i.e., Persil) was not significant. In contrast, for the unfamiliar detergent brand (i.e., Shemu) the difference in the level of green packaging label skepticism in low and high-uncertainty cultural groups was significant. When the green claim of an unfamiliar brand was communicated on the packaging label, the level of skepticism tends to be higher in high uncertainty avoidance cultural groups than in low uncertainty avoidance cultural groups; Study 2 provides additional evidence to support H1.

In general, the result of Study 1 and Study 2 confirm our conjecture that for less familiar brands, the skepticism of green claims tends to be more elevated in a high (vs. low) uncertainty avoidance culture, in contrast, such interaction was not significant for more familiar brands. Therefore, the result validates our H1. This implies marketers while designing and communicating advertising messages should support their claims with tangible evidence such as certified

eco-labels, and companies should also be open about the source of their materials, and their production and distribution system.

Table 2: Test of uncertainty avoidance, brand familiarity and green claim skepticism (detergent)

Brand	Variable	N	BF Mean	GCS Mean	t-Stat	p
PERSIL	Low UA	68	3.39	3.16	0.95	0.34
	High UA	73	3.58	3.03		
SHEMU	Low UA	68	1.63	3.23	-2.07	0.04*
	High UA	73	1.31	3.59		

Notes: *Significant in 0.05 levels. Source: Own compilation

III. Study 3

Green claim skepticism and green purchase intention

To test H2, where it was predicted that eco-claim skepticism would lower consumers' purchase propensity, this study employed multiple regression analysis. The first model, ⟨see Table 3⟩ presents a summary of the multiple regression which was used to examine the link between green claim skepticism, (GCS) and green purchase intention (GPI). As a result of the multiple regression analysis in the first model, 28.4 per cent of the variance is explained by GCS and EC (F = 28.87, 3.35e-11). The result suggests that GCS has a significant negative effect on GPI (β = -0.19204, t = -2.870, p < 0.001). This result indicates that when individuals are highly skeptical of environmental messages communicated by companies, they may view eco-friendly claims with suspicion and perceive them as insincere. As a result, they may perceive them as a marketing gimmick rather than a genuine effort to promote sustainability. This skepticism could limit their propensity to purchase eco-friendly products. Thus, H2 is supported.

Table 3: Regression Analysis of Moderation

| Model	Estimate	SE	t-Stat	p
(Intercept)	5.151	1.578	3.263	0.001
GCS	-1.417	0.441	-3.212	0.002**
EC	-0.426	0.365	-0.399	0.691
GCS x EC	0.360	0.102	2.808	0.005**
F= 28.86, p=1.57e-10, R^2= 0.295, Adj.R^2=0.285				

Notes: **Significant in 0.01 levels. Source: Own compilation

Moderation analysis

The goal of the moderation analysis was to validate H3 suggesting that consumers who are highly concerned about the environment will be more likely to be skeptical about pro-environmental communications made by companies and this may result in lower willingness to make green purchase. To put it differently, the negative effect of GCS on GPI would be elevated when consumers are more environmentally concerned than when they are less concerned.

The moderation analysis in Table 3 reveals that the interaction variable GCSxEC was created by multiplying the response of the predictor variable, GCS, with the response of the moderating variable, EC. It indicates that 37.1% of the variance in the moderation model are explained by the variables GCS, EC, and the interaction of GCS and EC. The moderation analysis used in this study (to test H3; see Table 3 and Figure 4) indicates a statistically significant interaction effect of GCS and EC on GPI (b= 0.360; t = 2.860, p < 0.01). The results reveal that environmental concern moderates the relationship between green claim skepticism and intention to buy eco-friendly products.
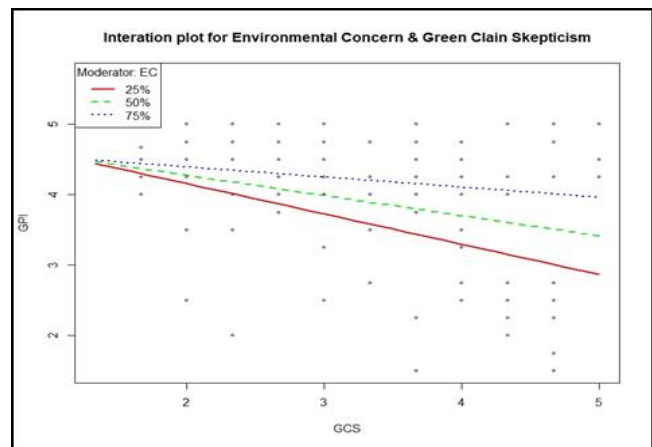
Source: Own compilation

Figure 4: Plot of the moderation effect of environmental Concern

The graphical representation of the effects, Figure 4 shows that the effect of the independent variable (GCS) on the dependent variable (GPI), conditioned by the moderating variable (EC). Therefore, this study, based on the result of the analysis, concluded that the moderating effect occurs in the link between GCS and GPI; this provides sufficient statistical evidence to support H3. This implies to raise concern for environmental problems, marketers in their packaging and print advertising claims should communicate factual and reliable environmental information in the distribution of green products.

Gender difference in Green Claim Skepticism and Green Purchase Intention

The objective of this test was to address whether there is significant difference between women and men respondents in their propensity to buy eco-friendly products and their level of pro-environmental message skepticism. H4 predicted that women will demonstrate a higher propensity to purchase green products than men. To validate this relationship, this study employed two independent sample t-

test using R-Programming. From Table 4, it is evident that gender difference in green purchase intention was not significant. The finding of the willingness to buy eco-friendly products for males (M_{Male} = 3.8636) and for females (M_{Female} = 3.8422) with the t-value (t = 0.13122) and significant level (p = 0.8958) shows that there is no significant difference between male and female study participants.

H5 proposed that men will present higher green claim skepticism than women. As shown in the mean score, males and females exhibit higher levels of skepticism for pro-environmental messages. However, the two independent t-test indicated that there is no difference in their level of skepticism, (M_{Male} = 3.454) and for female (M_{Female} = 3.134), with the t-value (t= 1.8473) and significant level (p = 0.06682).

Table 4: Comparison of Gender by GCS and GPI

Gender	N	GCS			GPI		
		Mean	t-Stat	p	Mean	t-Stat	p
Male	66	3.454	1.84	0.066	3.863	0.13	0.89
Female	75	3.134			3.842		

Source: Own compilation

Additional analysis

Although it was not hypothesized, the study compared high (vs. low) uncertainty avoidance cultural groups in terms of green purchase intention, environmental concern, and green claim skepticism. The results of two independent t-test revels that 〈see Table 5〉, for green purchase intention and environmental concern, the difference between high and low uncertainty avoidance cultural groups was not significant. The relationship between green purchase intention and high and low uncertainty avoidance was ($M_{HUA\ for\ GPI}$ = 3.724) ($M_{LUA\ for\ GPI}$ = 3.988) with (t = 1.6447, p = 0.10230) respectively. The study also compares environmental concern and uncertainty avoidance, and the result reveals that respondents with a high UA and low UA reported a mean score of ($M_{HUA\ for\ EC}$ = 4.14) and ($M_{LUA\ for\ EC}$ = 4.30) with (t = 1.6744, p = 0.09633). For robustness, the study examined group differences by splitting high (response above 3.5 on a Likert scale) and low (response below 3.5 on a Likert scale) environmental concern individual's response and compared with both groups. However, even after splitting the environmental concern score on the test, the result holds the same. This analysis provides interesting supportive empirical evidence that high and low uncertainty avoidance cultural groups exhibit a difference in their response towards eco-claims, such that the former demonstrated greater skepticism of green messages than the latter group. As shown below, for green claim skepticism and UA it was found that high UA skepticism was ($M_{HUA\ for\ GCS}$ = 3.443) while low UA

skepticism was ($M_{LUA\ for\ GCS}$ = 3.117) with (t = -1.8937, p = 0.00603).

Table 5: Comparison of high UA and low UA by GPI, EC and GCS

Variable	Low UA Mean	High UA Mean	t-Stat	p
GPI	3.988	3.72	1.64	0.102
EC	4.30	4.14	1.67	0.096
GCS	3.117	3.44	-1.89	0.006

Source: Own compilation

5.4. Discussion

This study sought to analyze how consumers' intention to purchase eco-friendly products is influenced by their skepticism toward the advertising and eco-label claim, national culture, brand familiarity and their environmental concern. To understand the relationships, two studies were undertaken. Particularly, it was found that consumers' skepticism toward green claims influenced the intention to purchase eco-friendly products. Specific results of the present study are discussed below. First, the results of the two independent t-test in Study 1 suggest that consumers in high uncertainty avoidance culture revels a higher level of skepticism for green print advertising when the brand in the ad was unfamiliar than when it was familiar. However, this phenomenon was not observed for consumers in low uncertainty avoidance culture. When the brand in the ad was familiar, both high and low uncertainty avoidance culture consumers exhibit a low level of skepticism. Uncertainty and ambiguity avoidance penalize less familiar brands that communicate environmental friendliness. Because consumers in a less uncertain avoidance culture are tolerant of unorthodox behavior and maintain more relaxed behavior, they exhibit less skepticism toward an unknown brand's sustainability advertising claim. Conversely, consumers in high uncertainty avoidance culture, because they have a strong preference for rules and structure, tend to feel uncomfortable when exposed to unfamiliar claims and be cautious in their evaluations. They are more likely to question the accuracy and reliability of marketing messages of unfamiliar brands as they lack prior exposure and a history of promoting sustainable practices.

Second, the present study replicated the first hypothesis with different stimuli (i.e., the green packaging claim). Consistent with Study 1, consumers in a high uncertainty avoidance culture exhibited a higher level of skepticism toward less familiar brands than low uncertainty avoidance culture. In line with this finding, extant studies reported that prior exposure to the brand reduces distrust and stimulates favorable advertising and brand evaluation. On the other hand, consumers also showed moderate evaluation of the cause-related communication of unfamiliar brands and

evaluation for familiar brands was reported as negative (Bhaduri & Copeland, 2021; Rhee & Jung, 2019). Guided by their broader values, high skeptic consumers tend to focus more on abstract and effortful stimuli which result in higher message engagement; this halts the activation of defence mechanism (Bae, 2020; Higgins, 2006).

Third, overall, to check the significance of high (vs. low) uncertainty avoidance in relation to GCS, EC and GPI, an independent sample t-test was carried out and the results indicate the absence of group difference in response to the constructs. Given the unique characteristics of high uncertainty avoidance culture, intolerance for ambiguity and vagueness, one could expect that high UA consumers to exhibit higher skepticism for eco-friendly products which did happen in this study. There was also no significant difference between high UA and low UA consumers in their green purchase intention. Likewise, this research found no significant difference between the two groups in their environmental concern. The result was insignificant even after splitting high and low environmental concern individuals.

Fourth, the study highlighted that the link between green claim skepticism and green purchase intention is subject to consumers' environmental concern. The relationship between packaging claim skepticism and purchase intention was negative; however, this relationship was conditioned by environmental concern. That is, when consumers are more skeptical of sustainability messages, they tend to purchase less eco-friendly products. But when consumers are more concerned about the environment, they tend to be less skeptical of green communication resulting in a higher purchase intention. Consistently, when consumers are highly concerned about the environment, they tend to scrutinize the pro-environmental messages made by brands. This increased scrutiny may cause higher green claim skepticism and subsequently diminish the propensity to make a green purchase. The result of this study is in line with Newell et al. (1998) that when consumers are highly concerned about the environment the deception level of green ads reduces.

Fifth, the present study shows that there are no significant differences between women and men in green claim skepticism and green purchase intentions. The result provides no sufficient statistical evidence to support the prediction that women would make greater green purchase intention than men. Similarly, men and women exhibited no difference in their skepticism toward green messages.

5. Conclusions, Limitations, and Future Research Directions

The finding of the present study has theoretical contributions. First, by drawing one of Hofstede's national culture dimensions, uncertainty avoidance (UA), this study argued that societies in high UA culture eschew skeptical messages when featured as unfamiliar brands than familiar brands. The proposed argument was partially significant as it was significant only for print (as opposed to packaging) green claim advertising. Therefore, this study suggests that consumers' skepticism toward companies' environmentally friendly messages depends on the characteristics of the target and the advertising channel through which the message is communicated. Second, in the print advertising condition, consumers evaluated unfamiliar brands less favorably (exhibit high distrust), than familiar brands. Thus, marketers of unfamiliar brands need to take extra caution while communicating their green claims. This phenomenon was more evident among high UA culture than low UA culture. Third, by examining the relationship between green claim skepticism and green purchase intention with the moderating effect of environmental concern, this study found that environmental concern shadows the negative effect of GCS on GPI. Therefore, to alter the negative effect of skepticism the consumer must believe the environmental claims are valid so that they can contribute to solving sustainability issues.

The finding of the present study also has managerial contributions. First, this study proposed that marketers need to design a proper persuasive message, particularly in print advertising, that can play down consumer skepticism. Marketers should be vigilant of consumer skepticism and need to ensure whether skepticism is prevalent by undertaking recurrent and periodical surveys and utilising the output to design less ambiguous and uncertain free environmental claims. Second, it is important not to put all consumers in the same basket, instead marketers while designing and communicating advertising messages should support their claims with tangible evidence such as certified eco-labels, and companies should also be open about the source of their materials, and their production and distribution system. Third, to raise concern for environmental problems, marketers in their packaging and print advertising claims should communicate factual and reliable environmental information. Skepticism can be minimized, if not alleviated, by disclosing sufficient proof of the environmental claim on the packaging or the print advertising in the distribution of green products.

This study is not without limitations; therefore, the findings should be interpreted with the following limitations in mind. Firstly, although the distribution of high and low uncertainty avoidance culture respondents was relatively equal, the score distribution was uneven. Some high UA culture countries score closer to 100 whereas others concentrated around the cutoff point. The same holds for low uncertainty avoidance countries. Therefore, research

should replicate the study by grouping countries into three categories, i.e., low, medium, and high, so that proper implication can be drawn. Secondly, in the study print and packaging advertising claims were examined and two products categories, apparel and detergent were considered. For better implication, further research should confirm whether green claim skepticism relates to high and low UA cultures by using different stimuli. Third, to increase generalizability future studies need to investigate the issue with a sample of participants with greater variability in demographics such as educational level, and age. Thirdly, experiences of using stimuli products, clothing, and detergent, were not considered for selecting sample. Instead, brand familiarity of respondents was measured in the analysis. Sample of users vs. non-users can be selected for analyzing the effect of brand usage.

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